

ACCESSION #: 9609030091

LICENSEE EVENT REPORT (LER)

FACILITY NAME: Millstone Nuclear Power Station Unit 1 PAGE: 1 OF 4

DOCKET NUMBER: 05000245

TITLE: Reactor Scram due to Inadvertent MSIV Switch Closure

EVENT DATE: 12/03/92 LER #: 92-028-01 REPORT DATE: 08/20/96

OTHER FACILITIES INVOLVED: DOCKET NO: 05000

OPERATING MODE: N POWER LEVEL: 100

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR SECTION:

50.73(a)(2)(iv)

LICENSEE CONTACT FOR THIS LER:

NAME: Robert W. Walpole, Nuclear TELEPHONE: (860) 440-2191

Licensing Supervisor

COMPONENT FAILURE DESCRIPTION:

CAUSE: SYSTEM: COMPONENT: MANUFACTURER:

REPORTABLE NPRDS:

SUPPLEMENTAL REPORT EXPECTED: NO

ABSTRACT:

On December 3, 1992, at 0920 hours, with the plant operating at 100% power (530 Degrees F and 1030 psig), a reactor scram occurred during the performance of a routine surveillance test on the Isolation Condenser system. During performance of the surveillance procedure, an operator inadvertently closed two Main Steam Isolation Valve (MSIV) switches which resulted in a Group 1 Containment Isolation signal on high main steam flow and a subsequent reactor scram. All safety systems functioned as required throughout the event.

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## I. Description of Event

On December 3, 1992, at 0920 hours, with the plant operating at 100% power (530 Degrees F and 1030 psig), a reactor scram occurred during the performance of a routine surveillance test on the Isolation Condenser (IC) system. During performance of the surveillance procedure SP 412L "Isolation Condenser Isolation Instrument Functional Test/Calibration", an operator inadvertently closed two Main Steam Isolation Valve (MSIV) switches which resulted in a Group I Containment Isolation signal on high main steam flow and a subsequent reactor scram. The location of the MSIV control switches on the control room boards are directly adjacent to the Isolation Condenser valve control switches.

All safety systems functioned as required throughout the event.

## II. Cause of Event

The cause of this event has been attributed to operator error due to lack of "self verification". The surveillance procedure being performing on the IC system at the time of the event is performed on a monthly basis. There have been no other incidents associated with the performance of this surveillance procedure.

A contributing factor to this event is the control board layout of the IC system control switches. As shown in the attached figure, the IC system control switches are physically separated by the

inboard and outboard MSIV control switches and the Containment Atmosphere Control valve switches by approximately four feet. During the performance of SP 412L "Isolation Condenser Isolation Instrument Functional Test/Calibration", IC system valves IC-2, IC-3, and IC-6&7 are operated from the left side of MSIV control switches. IC system valves IC-1, IC-4 and the IC isolation logic reset switch, are operated from the right side of the MSIV control switches and the Containment Atmosphere Control valve switches. The control switches for MSIV's MS-1A and MS-1C were inadvertently closed instead of IC-6&7 and IC-3 during performance of the surveillance test. This physical separation of the IC system valve control switches by the MSIV control switches is the original plant design of Millstone Unit One.

### III. Analysis of Event

This event was reportable pursuant to 10CFR50.73(a)(2)(iv), any event or condition that resulted in a manual or automatic actuation of any Engineered Safety Feature (ESF), including the Reactor Protection System (RPS). Immediate notifications were performed in accordance with 10CFR50.72(b)(2)(ii).

A MSIV closure from 100% power is a moderate frequency design basis accident described in Chapter 15 of the Millstone Unit One Updated Final Safety Analysis Report. Due to the performance of the Isolation Condenser surveillance procedure, the IC was out of

service during the scram event and no automatic IC initiation signals were generated during this event.

The inadvertent closure of the MSIV control switches resulted in a Group I Containment Isolation signal, a reactor scram signal, and closure of the inboard and outboard MSIV's. The cause of the scram and Group I Containment Isolation signal was immediately recognized by the reactor operator performing the surveillance. This prompt action resulted in re-opening the MSIV's and establishing the main condenser as the primary heat sink. No Safety Relief Valves (SRV's) were required to open during this transient. The highest reactor pressure recorded by the process computer was approximately 1083 psig which is below the SRV opening setpoint.

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#### IV. Corrective Action

The individual operator involved in this incident was counseled. The Operations Manager also discussed the scram event with each operating crew. The practice of "self verification", especially during routine and frequently performed evolutions, was emphasized as a vital part of safe reactor plant operation.

Millstone Station has implemented a site wide "self checking" program to improve "attention to detail". It is well recognized that "self checking" is a skill, and to be proficient, this skill must be practiced during day to day activities and in the training

environment.

A Human Performance Evaluation (HPES) review of this incident was completed which helped to identify the root cause and other contributing factors. As a result of this review, small, easily removable, plexiglass covers were installed on the MSIV control switches to provide an additional barrier against inadvertent switch operation.

The first phase of the Millstone Unit One Control Room Design Review (CRDR) project was implemented during the 1991 Refueling Outage.

The modifications associated with the IC system included the installation of a system mimic and color coded valve control switches. Originally, it was intended that the second phase of the CRDR project would relocate the necessary IC system control valve switches so that all control switches would be located at the same board location. This modification was scheduled to be implemented during the next refueling outage (i.e., after the 1991 RFO). The relocation of the Isolation Condenser valve control switches was not implemented, and is not intended to be implemented, since a further HPES review indicated that relocation of these switches could create additional Human Engineering Deficiencies (HEDs).

## V. Additional Information

### Commitments

There are no commitments contained within this letter. All

corrective actions listed above have been completed.

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Figure "MP1 CONTROL ROOM PANEL LAYOUT" omitted.

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Northeast Millstone Offices o Rope Ferry Rd., Waterford,CT

Utilities System

P.O. Box 128

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August 20, 1996

Docket No. 50-245

B15852

Re: 10CFR 50.73(a)(2)(iv)

U. S. Nuclear Regulatory Commission

Document Control Desk

Washington, D.C. 20555

This letter forwards supplemental Licensee Event Report (LER) 92-028-01,  
documenting an event that occurred at Millstone Nuclear Power Station,  
Unit No. 1 on December 3, 1992. This LER is submitted pursuant to  
10CFR50.73(a)(2)(iv).

This supplemental LER corrects information contained in the corrective  
actions. It was originally intended that certain isolation condenser  
control switches would be relocated on the control room panel so that all

of the isolation condenser controls were located together. Further review of the human factors associated with such a modification determined that moving the switches would create additional human factor deficiencies in control panel layout. This supplement identifies that the proposed modification was not implemented.

Additionally, this supplement defines the initialism "IC" in the first paragraph of the description of the event. It was discovered that the text uses the initialism without having defined that it stands for "isolation condenser". The Licensee contact was also changed, as well as some of the verb tenses for corrective actions that have been completed.

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY

W. J. Riffer

Director - Millstone Unit No. 1

Attachment: LER 92-028-01

cc: H. J. Miller, Region I Administrator

T. A. Easlick, Senior Resident Inspector, Millstone Unit No. 1

J. W. Anderson, NRC Project Manager, Millstone Unit No. 1

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